

EXHIBIT 30

Orhan
Demirovic/US/GM/GMC
08/14/2007 09:29 AM

To william.hohnstadt [REDACTED] Lois M.
Gurnsey/US/GM/GMC [REDACTED] John
Sprague/US/GM/GMC [REDACTED]
cc
bcc

Subject Field Event Report for GMX001 - review

History: This message has been forwarded.

We are meeting to go over this report (GMX001 field event) . This Thursday 08/16/07 at 11:30 here in VPC building.

I have conference room # 223-03 reserved for us .

Here is a copy of Siemens' report that was provided based on the SDM readout.



MY2005_GMX001_report.doc

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SIEMENS VDO AUTOMOTIVE CORPORATION
FIELD EVENT ANALYSIS REPORT

I. Overview

A. General Description – General Motors Corporation has provided the following information to Siemens VDO Automotive Corporation:

Model Year	2005
Vehicle Type	GMX001 Chevrolet Cobalt
Description of Event	Side swipe impact (1) to right front quarter panel, followed by Frontal collision (2) with tree, followed by impact with another vehicle (3).
Legal action pending (Y or N)	No
Location of event	Iberia, LA
Date of event	November 17, 2005
Impacted object	Car and tree
VIN	1G1AL52F857579918
Mileage	Not provided

GM also provided the police report for this event and some photos.

B. Module Description

#	Module Type	GM Part Number	MLFB Number	Serial Number	Algorithm Level	Calibration
1	GMX001 – 6 loop	15249432	5WY74090	001102125717	SFA – GM MY05	PFT3210A.par

II. Analysis

A. Multiple Event and Vehicle Data

The multiple event data provides additional information about the overall event:

Event Information from Non Deployment Buffer S/N: 001102125717

Information	Status
Was Data Locked??	No
Was the Event a Deployment Event?	No
Was the Vehicle Information Associated with this Event?	No
Was the Event a Non-Deployment Event?	Yes
Did this Event have the Largest Delta V?	Yes
Was this a frontal event?	Yes
Was this a side event?	No
Was this a rollover event	No

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A. Multiple Event and Vehicle Data (cont'd)

Event Information from Deployment Buffer

Information	Status
Was Data Locked??	No
Was the Event a Deployment Event?	No
Was the Vehicle Information Associated with this Event?	No
Was the Event a Non-Deployment Event?	No
Did this Event have the Largest Delta V?	No
Was this a frontal event?	No
Was this a side event?	No
Was this a rollover event	No

Multiple Event Status

Information	Status
Was there an event that preceded the recorded events?	Yes
Was there an event that was in between the recorded events?	No
Was there an event that followed the recorded events?	Yes
Was an event not recorded a deployment event?	No
Was an event not recorded a non-deployment event?	Yes
Multiple Event Counter	2
Time Between Multiple Events (mS)	0

There was a qualified Non-Deploy event (8 km/h or higher) that preceded the recorded event, within 5 seconds of the recorded event. There was also a qualified Non-Deploy event that followed the recorded event within 5 seconds of the first (not recorded) event. These other events had lower delta velocity than the recorded event. The Multiple Event Counter indicates the number of qualified Non-Deploy events (2) other than the event recorded. The Time Between Multiple Events does not apply since only one event was recorded. Only the non deploy event with the largest change in velocity was recorded per the GM specification.

A. Multiple Event and Vehicle Data (cont'd)

The vehicle data stored was associated with first (not recorded) Non-Deploy event:

Event Data		S/N: 001102125717					Mask No.: 0F01021104		
Item	1 Second	2 Seconds		3 Seconds		4 Seconds		5 Seconds	
		Prior	Prior	Prior	Prior	Prior	Prior	Unit	Validity
Vehicle Settings-									
Accelerator Actual Position	0	16.47058824	0	71.37254902	75.29411765	%	Valid		
Brake Pedal Status	Off	Off	Off	Off	Off	-	Valid		
Throttle Position	16.07843137	41.96078431	19.60784314	70.19607843	72.94117647	%	Valid		
Steering Wheel Angle	0	0	0	0	0	Deg	Valid		
Transmission Actual Gear Status	Fourth Gear						-		Valid
Transmission Gear Selector Position Status	Fourth Gear						-		Valid
Engine Speed	1856	2496	2368	3776	3712	RPM	Valid		
Vehicle Speed	87	104	105	104	99	km/h	Valid		
Cruise Control Settings-									
Cruise Control Active	Off	Off				-	Valid		
Cruise Control Resume Switch Active	Off	Off				-	Valid		
Cruise Control Set Switch Active	Off	Off				-	Valid		
Engine Limp Home Mode Active	Off	Off				-	Valid		
Vehicle Stability-									
ABS Status	Active	Not Active	Not Active	Not Active	Not Active	-	-		
Traction Control System Status	Not Active					-	Valid		
Vehicle Dynamics Control Status	Not Active	Not Active	Not Active	Not Active	Not Active	-	Invalid		
Vehicle Dynamics Lateral Acceleration	0	0	0	0	0	m/s^2	Invalid		
Vehicle Dynamics Yaw Rate	0	0	0	0	0	deg/sec	Invalid		
Temperature-									
Outside Air Temperature Corrected Value	14					Deg C	Valid		
Lighting-									
High Beam Active	Off					-	Valid		
Low Beam Active	Off					-	Valid		
Door Status-									
Driver Door Status	Closed					-	Valid		
Passenger Door Status	Closed					-	Valid		
Left Rear Door Status	Unused					-	Valid		
Right Rear Door Status	Unused					-	Valid		
Rear Closure	Closed					-	Valid		
Time-									
Calender Year	2003					-	-		
Calender Month	June					-	-		
Calender Day	12					-	-		
Time of Day -Hour	0					-	-		
Time of Day -Minute	0					-	-		
Positioning Status-									
Positioning System Latitude	0					ms arc	Invalid		
Positioning System Longitude	0					ms arc	Invalid		
Driver Indicators									
Indicator	Status	Validity							
Service Engine Soon (Non Emission Related)	Off	Valid							
Service Vehicle Soon	Off	Valid							
Brake Warning Lamp	Off	Valid							
Tire Pressure Low	Off	Valid							
ABS System Failure	Off	-							
Vehicle Identification Number - VIN									
VIN Digit 3	1								
VIN Digit 4	A								
VIN Digit 5	L								
VIN Digit 6	5								
VIN Digit 7	2								
VIN Digit 8	F								
VIN Digit 10	5								
VIN Digit 12	5								
VIN Digit 13	7								
VIN Digit 14	9								
VIN Digit 15	9								
VIN Digit 16	1								
VIN Digit 17	8								

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B. Restraints Buffers

Per the Multiple Event data, the second event was recorded in the Non-Deploy Restraints EEPROM buffer. There was no event stored in the Deploy Restraints EEPROM buffer since no deployment occurred.

In the Non-Deploy Restraints buffer, there were no faults at the time the second event started:

Active Faults at Time of Event		S/N: 001102125717		Mask No.: 0F01021104
Code	Definition	Sub-Type	Definition	
N O Codes	None	00	no additonal information	
N O Codes	None	00	no additonal information	
N O Codes	None	00	no additonal information	
N O Codes	None	00	no additonal information	
N O Codes	None	00	no additonal information	
N O Codes	None	00	no additonal information	

Lamp status also shows no faults for 10920 minutes of SDM operation:

Lamp Status(Event Enable)

State of Lamp at Event Enable		
Setting in EE	Indication	
0	Lamp Off	
Time for Warning Lamp Continuously On/Off at Event Enable		
Hex Value	Time (sec.)	Time (minutes)
FFFO	655200	10920

Ignition cycle counters recorded at start of the second event:

Ignition Cycle Counters

Ignition Cycles with Warning Lamp Continuously On/Off	
Hex Value	# of Cycles
0F16	3862
Ignition Cycles Since Fault Codes were Cleared	
Hex Value	# of Cycles
FE	254
Ignition Cycles at Event Enable	
Hex Value	# of Cycles
0F17	3863

Driver and Passenger Buckle status at start of second event:

Seat Belt and Position Switch Data

Type	Definition	Setting in EE
Driver Seatbelt	unbuckled	0
	monitored	1
Passenger Seatbelt	buckled	1
	monitored	1

At the start of the second event, all deployment loops were enabled:

Loop Suppression		S/N: 001102125717			Mask No.: 0F01021104
Loop	Driver EE Bit	Driver Status	Pass EE Bit	Passenger Status	
Frontal S1	0	Enabled	0	Enabled	
Frontal S2	0	Enabled	0	Enabled	
Pretentioner	0	Enabled	0	Enabled	
Side Curtain	0	Enabled	0	Enabled	
Side Thorax-F	0	Enabled	0	Enabled	
Side Thorax-R	0	Enabled	0	Enabled	

B. Restraints Buffers (cont'd)

No deployment was commanded for any loops:

Deployment Commanded		S/N: 001102125717	Mask No.: 0F01021104	
Loop	Driver EE Bit	Driver Status	Pass EE Bit	Passenger Status
Frontal S1	0	No	0	No
Frontal S2	0	No	0	No
Pretentioner	0	No	0	No
Side Curtain	0	No	0	No
Side Thorax-F	0	No	0	No

No algorithm deployment decisions were reached:

Algorithm Timing and Max Delta V

Time from Event Enable to Deployment				
Loop	Driver Hex Value	Driver Time(mS)	Pass Hex Value	Pass Time (mS)
Frontal S1	00	0	00	0
Frontal S2	00	0	00	0
Side Cur/Thor	00	0	00	0

The maximum delta velocity recorded in the recorded event:

Max Delta V= 54.54340541 kph

Time to max delta velocity:

Time from Event Enable to Max Delta V	
Hex Value	Time (mS)
0B	110

Internal algorithm data, indicating no decisions reached:

Algorithm Start Time

Hex Value	Time (mS)
00	0

Algorithm Duration

Hex Value	Time (mS)
00	0

Time from Event Enable to Predicted Displacement Reached

Hex Value	Time (mS)
00	0

Time Trigger Switch Closed

Hex Value	Time (mS)
0000	0

Algorithm Decision for Deployment

Loop	Hex Value	Time (mS)
No Belt S1	0000	0
No Belt S2	0000	0
With Belt S1	0000	0
With Belt S2	0000	0

At the start of the second event, both the front and side algorithms were disabled:

Algorithm Enable

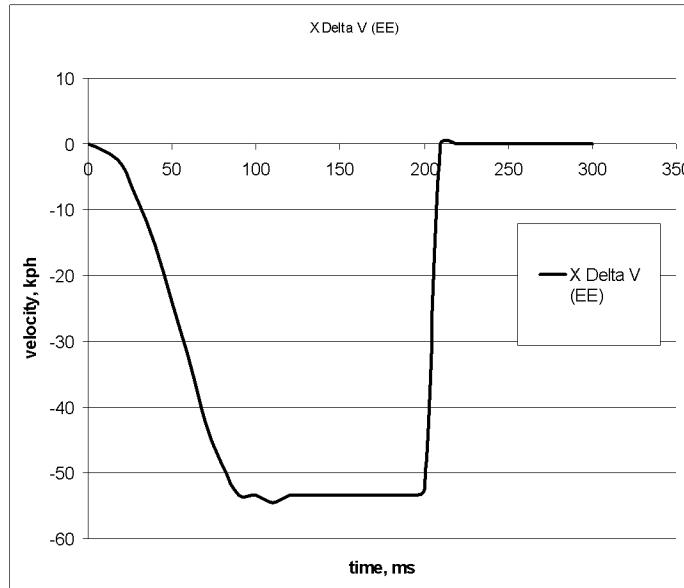
Algorithm	Setting in EE	Functionality
Front	1	Disabled
Side	1	Disabled

The Sensing and Diagnostic Module (SDM) did not deploy because the algorithms were disabled at the start of the second (recorded) event.

C. EDR graphs:

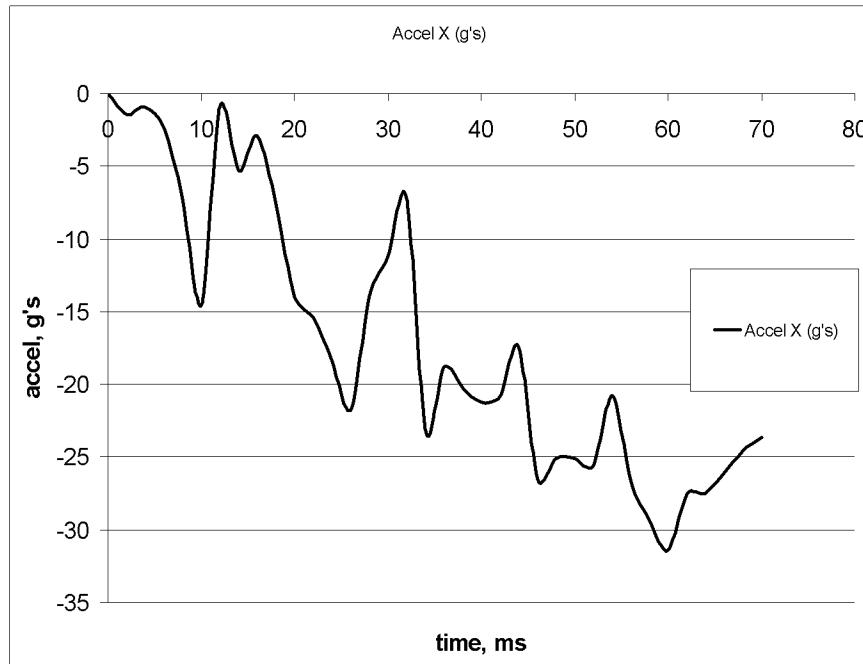
There were no velocity or acceleration data stored in the Deploy EEPROM buffer. SDM X and Y, and EFS data were stored in the Non-Deploy EEPROM buffer.

SDM X Velocity from start of second event until EDR reset:



Time (ms)	GMLAN DPID	GMLAN Byte	X Delta V (kph)
0	None	None	0
10	\$47	1	-1.091
20	\$47	3	-3.272
30	\$47	5	-8.725
40	\$48	1	-15.269
50	\$48	3	-23.994
60	\$48	5	-32.72
70	\$49	1	-42.535
80	\$49	3	-49.079
90	\$49	5	-53.442
100	\$4A	1	-53.442
110	\$4A	3	-54.533
120	\$4A	5	-53.442
130	\$4B	1	-53.442
140	\$4B	3	-53.442
150	\$4B	5	-53.442
160	\$4C	1	-53.442
170	\$4C	3	-53.442
180	\$4C	5	-53.442
190	\$4D	1	-53.442
200	\$4D	3	-52.351
210	\$4D	5	0
220	\$4E	1	0
230	\$4E	3	0
240	\$4E	5	0
250	\$4F	1	0
260	\$4F	3	0
270	\$4F	5	0
280	\$50	1	0
290	\$50	3	0
300	\$50	5	0

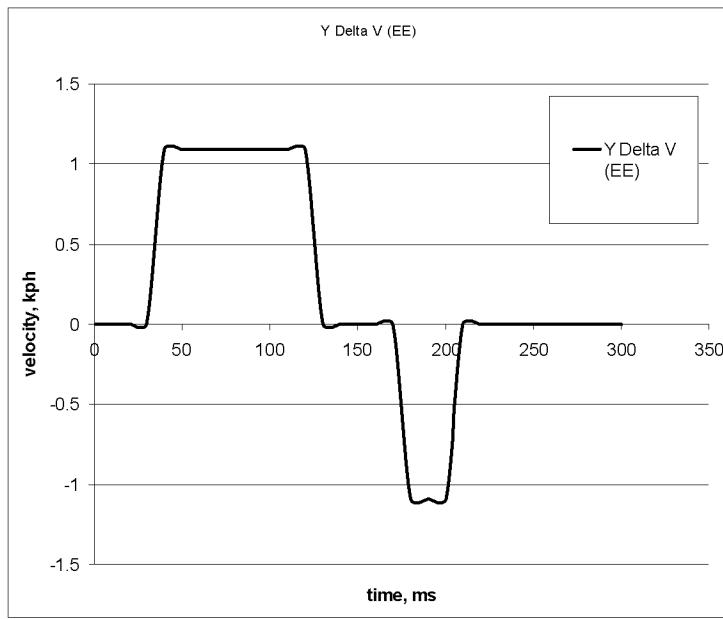
SDM X Acceleration from start of second event to 70ms:



Time (ms)	Accel X (g's)
0	0
2	-1.449
4	-0.966
6	-2.415
8	-7.246
10	-14.493
12	-0.966
14	-5.314
16	-2.899
18	-7.729
20	-14.01
22	-15.459
24	-18.357
26	-21.739
28	-14.01
30	-11.111
32	-7.246
34	-23.188
36	-18.841
38	-20.29
40	-21.256
42	-20.773
44	-17.391
46	-26.57
48	-25.121
50	-25.121
52	-25.604
54	-20.773
56	-26.57
58	-29.469
60	-31.401
62	-27.536
64	-27.536
66	-26.087
68	-24.638
70	-23.671

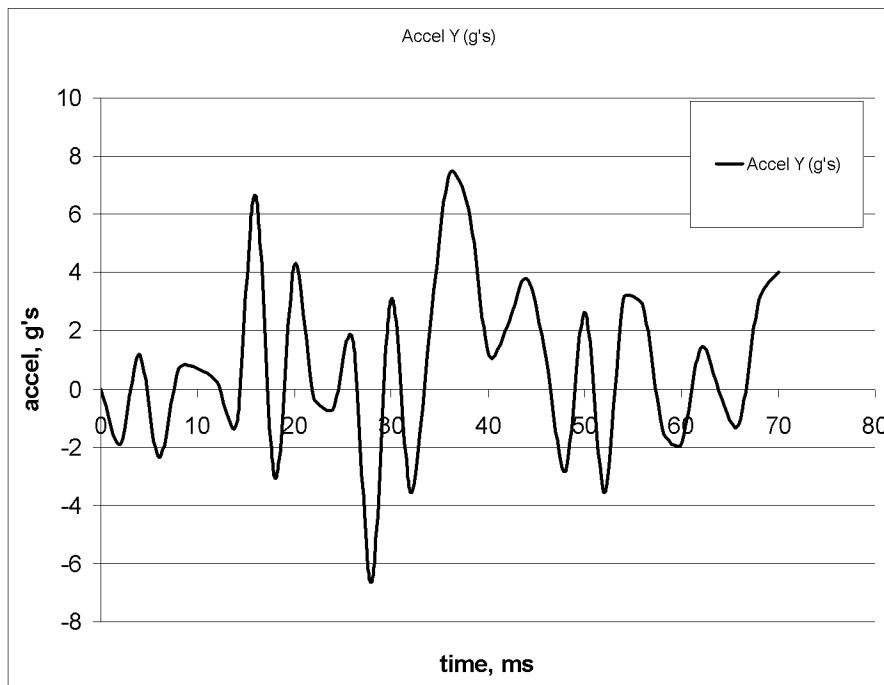
C. EDR graphs (cont'd)

SDM Y Velocity from start of second event until EDR reset:



Time (mS)	GMLAN DPID	GMLAN Byte	Y Delta V (kph)
0	None	None	0
10	\$47	2	0
20	\$47	4	0
30	\$47	6	0
40	\$48	2	1.091
50	\$48	4	1.091
60	\$48	6	1.091
70	\$49	2	1.091
80	\$49	4	1.091
90	\$49	6	1.091
100	\$4A	2	1.091
110	\$4A	4	1.091
120	\$4A	6	1.091
130	\$4B	2	0
140	\$4B	4	0
150	\$4B	6	0
160	\$4C	2	0
170	\$4C	4	0
180	\$4C	6	-1.091
190	\$4D	2	-1.091
200	\$4D	4	-1.091
210	\$4D	6	0
220	\$4E	2	0
230	\$4E	4	0
240	\$4E	6	0
250	\$4F	2	0
260	\$4F	4	0
270	\$4F	6	0
280	\$50	2	0
290	\$50	4	0
300	\$50	6	0

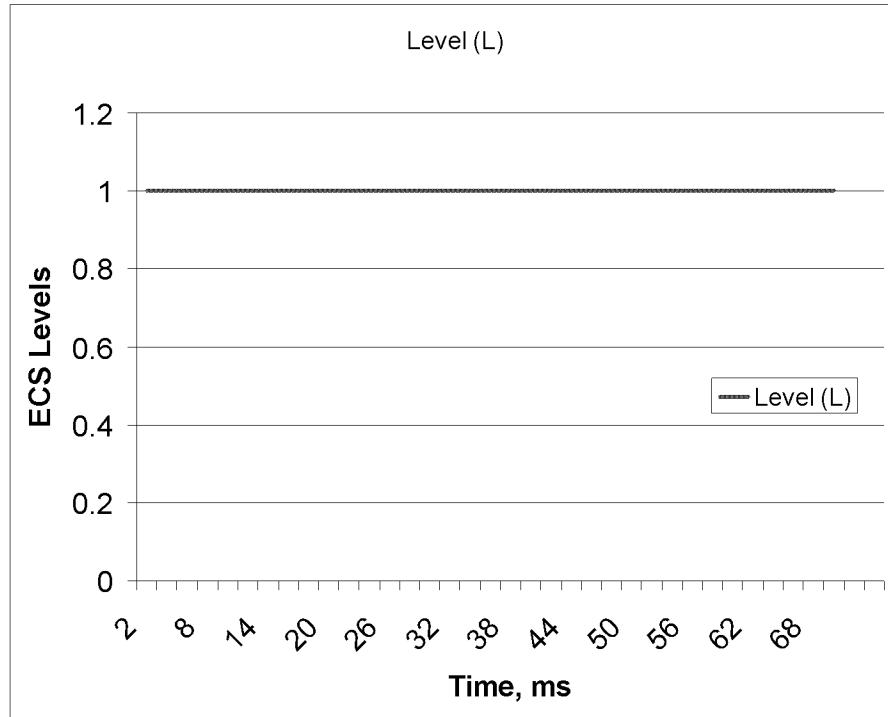
SDM Y Acceleration from start of second event to 70ms:



Time (mS)	Accel Y (g's)
0	0
2	-1.896
4	1.185
6	-2.37
8	0.711
10	0.711
12	0.237
14	-1.185
16	6.635
18	-3.081
20	4.265
22	-0.237
24	-0.711
26	1.659
28	-6.635
30	3.081
32	-3.555
34	1.896
36	7.346
38	6.161
40	1.185
42	2.133
44	3.791
46	0.948
48	-2.844
50	2.607
52	-3.555
54	3.081
56	2.844
58	-1.422
60	-1.896
62	1.422
64	-0.237
66	-1.185
68	3.081
70	4.028

C. EDR graphs (cont'd)

Electronic Crash Sensor (ECS) Acceleration Levels from start of second event to 70ms:



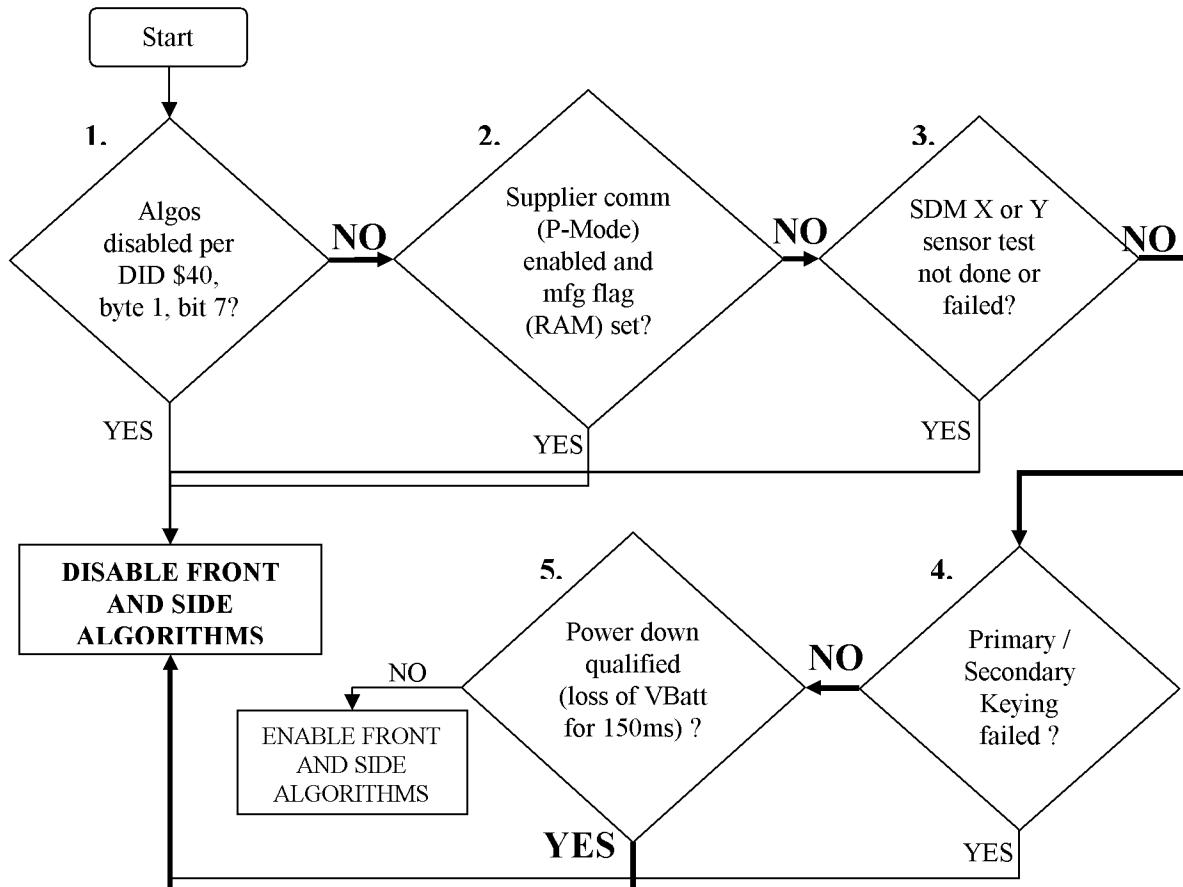
Every ECS level is equal to approximately 8 g's of deceleration.

The flat ECS signal shown above is consistent with an ECS that has been shut down due to a loss of battery.

D. Algorithm Disable Evaluation

As stated in Section B, Restraints Buffers, the front and side algorithms were disabled when the recorded event began. This was the second event of three events according to the multiple event data. Also, there were no qualified faults when the recorded event began. This section will proceed through the software code to determine under what conditions the front and side algorithm disable condition can occur.

Software logic for algorithm disable:



1. Per the stored EEPROM configuration, DID \$40, byte 1, bit 7, was set to 0, which means algorithms were NOT disabled by configuration.
2. The module was locked and installed in the vehicle, operating without faults. The manufacturing flag is enabled with test equipment at Siemens' manufacturing facility.
3. No faults recorded at time of event, so sensors did not fail sensor test. SDM X and Y acceleration and velocity recorded, consistent with physical event.
4. Primary/Secondary key mismatch detected at SDM power up and would result in a fault code. There were no faults recorded at time of event.
5. 150ms after the SDM qualifies loss of battery, the front and side algorithms are disabled.

D. Algorithm Disable Evaluation (cont'd)

The Sensing and Diagnostic Module (SDM) constantly monitors the battery voltage while powered up. If the SDM detects loss of battery, it performs qualification. Thus, momentary drops of battery voltage do not result in loss of battery qualification. When loss of battery is qualified, the SDM enters energy reserve mode. At this time, the SDM shuts down the side satellites. The Electronic Crash Sensors (ECS's) are shut down after a minimum of 60ms in energy reserve mode. After 150ms in energy reserve mode, the SDM sets the power down qualified flag, which then sets the front and side algorithm disabled flags.

When the front algorithm disable flag is set, the SDM immediately resets the front algorithm and prevents future calls to the front algorithm.

E. Conclusions

Based on the recorded data as depicted in the above graphs, the Siemens VDO electronic crash sensor performed in accordance with specification. The SDM experienced loss of battery at some point prior to the recorded Non-Deploy event; the loss of battery was qualified and the front and side algorithms were disabled until the SDM eventually depleted its energy reserve and shut down. The SDM had sufficient energy reserve to record the Non-Deploy event and detect and qualify a third Non-Deploy event.

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